

STUDY TITLE: Bristol Bay Subsistence Harvest.

REPORT TITLE: Bristol Bay Subsistence and **Sociocultural** Systems Inventory.

CONTRACT NUMBER: 14-35-0001-3047% Technical Report Number 150.

SPONSORING OCS REGION: Alaska.

APPLICABLE OCS PLANNING AREA: North Aleutian Basin, **Shumagin**, St. George Basin, **Navarian** Basin.

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KEY WORDS: Bristol Bay; Chignik Lake; **Dillingham**; **Naknek**; New **Stuyahok**; **Nondalton**; Port **Heiden**; **Togiak**; subsistence; socioeconomic **trends**; commercial fishing; historical **changes**; resource **harvesting**; resource processing cooperation; sharing networks.

BACKGROUND: In 1975, in response to a lack of published **information** on which to base environmental impact statements, the Minerals Management Service (**MMS**) began to sponsor a series of social and economic studies in a variety of offshore areas. The goal of these studies is to provide information necessary in the development of accurate and defensible environmental assessments and to make possible the monitoring of environmental effects from OCS development should such effects occur. Because harvests of naturally-occurring, renewable (wild) resources are important to **rural** Alaskan communities, much work has focused on subsistence issues. The need for Bristol Bay subsistence-harvest and **sociocultural** information had been identified in **several** MMS Alaska Regional Studies Plans. The Alaska Department of Fish and Game (**ADF&G**), Division of Subsistence, as a result of an FY-1988 study, supplied **MMS** with a computerized data base and technical papers from baseline subsistence studies they had conducted in Bristol Bay communities beginning in 1980.

**OBJECTIVES:** The general purpose was to describe and analyze the harvests and uses of wild resources for the Bristol Bay region. Specific study objectives were: 1) development of a typology of subregions within Bristol Bay based on **multivariate** analysis of subsistence harvesting and processing 2) examination of the ethnographic meanings and context of subsistence; and, 3) analysis of the key political, economic, social, and cultural factors that affect subsistence pursuits.

**DESCRIPTION** The **ADF&G** data base was analyzed. Researchers compared protocols used to collect data in various communities and analyzed data that were present for most communities. Cluster analysis, Fourier plots, and Guttman-Lingoes multidimensional similarity structure analysis were used to compare communities and **identify** subregions within Bristol Bay. Based on this analysis and a review of secondary literature, seven communities were selected to **represent** the subregional variation in subsistence harvesting **Chignik Lake; Dillingham; Naknek; New Stuyahok; Nondalton; Port Heiden; and Togiak**. Fieldwork was conducted in these communities during August and September 1990. Focused discussions were conducted with members of randomly selected households (212 households representing 778 total household members) and with institutional officials (98 people), and subsistence practices were observed. Cooperation and sharing networks based on geography and kinship were analyzed to illustrate the importance of subsistence activities to social structure. Models of individual and household participation in subsistence activities were constructed by regressing each of three, weighted involvement indices on a set of explanatory variables. Fourier plots and Guttman-Lingoes multidimensional similarity structure analysis were used to compare communities based on subsistence harvesting and processing patterns. The meanings of subsistence, changes in subsistence practices, and threats to subsistence were also analyzed.

**SIGNIFICANT CONCLUSIONS:** Harvests of naturally-occurring resources were generally high in all communities. Comparisons between sample communities indicate that geography as well as socioeconomic characteristics account for resource harvesting patterns. This study documented the existence and extent of networks between households for the harvesting, processing, and sharing of subsistence resources. Analysis of these networks suggests that subsistence is an important foundation of regional social structure, provides **intra-** and inter-community integration and cohesion, and helps to maintain Native cultural traditions. This study found that those individuals most **likely** to engage in subsistence activities are long-term residents, males, younger adults, Alaska Natives, and those from larger households, although there are variations in this pattern across resource categories. The researchers found a positive relationship between involvement in commercial fishing and involvement in subsistence, at both the individual and household levels, indicating that these two activities are integrated. Open-ended discussions with interviewees revealed that subsistence adds meaning to people's lives, people desire to maintain subsistence lifestyles, and people are concerned about various perceived threats to subsistence.

**STUDY RESULTS:** Bristol Bay communities were compared using **ADF&G** data on the percentages of households harvesting various types of resources (a rough indication of involvement in subsistence activities) and the average pounds per household harvested (a

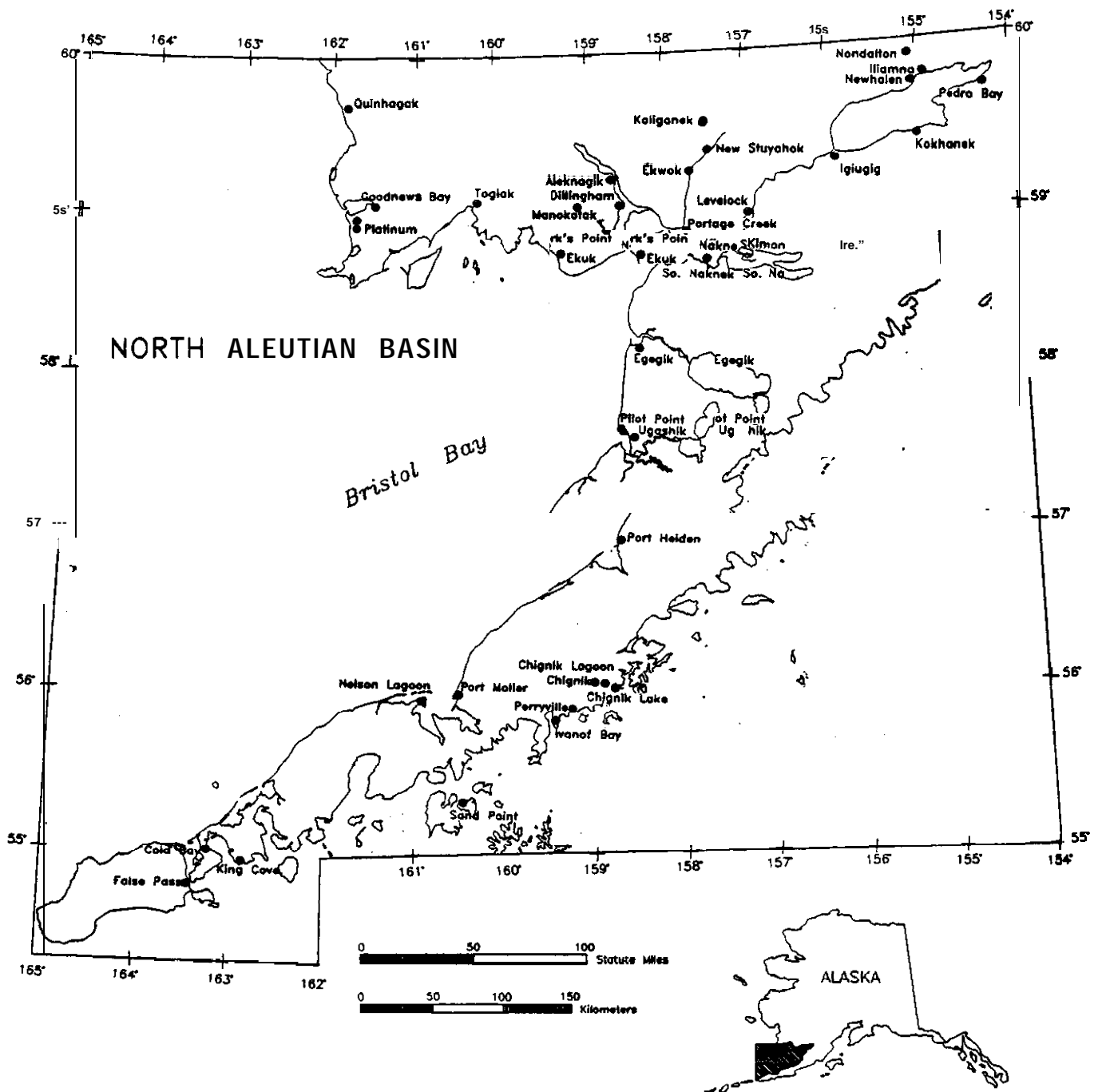
measure of nutritional dependence upon particular foods). Community comparisons indicated that there are three distinct subregions in Bristol Bay the Pacific side of the **Alaska Peninsula; coastal** communities on the Bristol Bay side of the Alaska **Peninsula**; and, inland or “upriver” communities. Some comparisons produced finer distinctions within these subregions.

Fieldwork focused on documenting connections between households that cooperate in subsistence activities and share subsistence resources. The researchers calculated the percentages of households in each community that have harvesting and processing (cooperation) and giving and receiving (sharing) ties to households in various locations (geographic networks) and to households that are related to them in various ways (kinship networks). Sharing networks generally are more extensive and intricate than cooperation networks while harvesting networks are more extensive than processing networks. In terms of geography, cooperation and sharing networks are concentrated within communities but extend to other communities throughout the Bristol Bay region, to other areas of Alaska, to the lower 48 states, and, in a few instances, to foreign countries. Cooperation between households generally decreases as distance increases. While the most sharing occurs between households within the same community, Bristol Bay communities give more resources to people outside the region than they receive, suggesting that Bristol Bay is a net “exporter” of subsistence foods. Our data indicate that kinship is the primary basis for cooperating in subsistence pursuits and sharing subsistence resources. Subsistence resources are widely shared among family and friends, with need being a determining factor in their distribution. Variations in cooperation and sharing patterns were observed across sample communities and resource groups. The researchers concluded that study communities play different roles in regional subsistence networks and certain resources are more important to the maintenance of subsistence networks.

Interviewees stressed the meaning and importance of subsistence in their lives. Meanings of subsistence are based on cultural continuity (need and preference for **naturally-occurring** foods, sharing, relationship with place, family traditions and recollections), the social and recreational pleasures of subsistence activities, and the **contribution** that subsistence makes to economic security and psychological well-being. The threats to subsistence resources and activities most commonly mentioned were increases in government regulations, federal take-over of resource management in the wake of the **McDowell** decision, resource depletion, increased conflicts between user groups, and oil exploration and potential development.

**STUDY PRODUCTS:** Endter, J., Robbins, L., Levine, D., **Boxberger**, D., **Nohalty**, P., Jorgensen, J., McNabb, S. 1992. Bristol Bay Subsistence Harvest and **Sociocultural** Systems Inventory. Final Report by Social Science Research Associates for the U. S. Department of the Interior, Minerals Management Service, Alaska OCS Office, Anchorage, Alaska. Social and Economic Studies Program Technical Report No. 150. MMS Report 92-0036. Contract No. 14-35-001-30479. 426 pp.

A computerized database and other research materials are maintained by Social Science Research Associates, 20 South 1300 East, Logan, Utah 84321-4940.



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